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Bei Eingriffen Schutzmaßnahmen für MOS-Bauteile beachten!

Das Gerät muß auch nach der Reparatur den Sicherheitsbestimmungen nach DIN/IEC 65 VDE 0860 entsprechen.

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N.B. When carrying out repairs, observe MOS precautions!

After the unit has been repaired, it should still meet the DIN/IEC 65 VDE 0860 safety requirements.

Ausbauhinweise

Gehäuseoberteil

- 5 Schrauben a herauschrauben.
- Gehäuseoberteil abnehmen.

Front

- Steckverbindungen zur NF-Platte (P401) lösen.
- 5 Schrauben b herauschrauben.
- 2 Rastnasen c ausrasten.
- Front abnehmen.

Prozessorplatte (PU01)

- Frontblende abnehmen.
- Schraube d herauschrauben.
- Prozessorplatte abziehen.

Bedienplatte (PF01) und Stand by-LED-Platte (PU51)

- Prozessorplatte ausbauen.
- 3 Muttern e abschrauben.
- Mutter f abschrauben.
- 4 Schrauben g herauschrauben.
- Rastnasen ausrasten.
- Die beiden Platten herausnehmen.

Lautsprecherauswahlplatte (PW01)

- Frontblende abnehmen.
- 2 Schrauben h herauschrauben.
- Lautsprecherauswahlplatte herausnehmen.

Kopfhörerbuchsenplatte (PW51)

- Frontblende abnehmen.
- Schraube i herauschrauben.
- Kopfhörerbuchsenplatte herausnehmen.

NF-Platte (P401)

Für Arbeiten an der NF-Platte kann der Boden geöffnet werden.

Ausbau der NF-Platte:

- Steckverbindungen lösen.
- 4 Schrauben k herauschrauben.
- 6 Schrauben l herauschrauben.
- NF-Platte herauschrauben.

Trafo (L001)

- Verbindungen lösen.
- 4 Schrauben m herauschrauben.
- Trafo herausnehmen.

Netzteilplatte (PS01)

- Verbindungen lösen.
- Schraube n herauschrauben.
- Netzteilplatte herausnehmen.

Disassembly Instructions

Cabinet Top

- Unscrew 5 screws a.
- Remove the top of the cabinet.

Front

- Disconnect the plug-in connections to the AF board (P401).
- Unscrew 5 screws b.
- Disengage the two latches c.
- Remove the front.

Processor Board (PU01)

- Remove the front.
- Unscrew screw d.
- Pull off the Processor board.

Control Circuit Board (PF01) and Stand by LED Board (PU51)

- Remove the Processor board.
- Unscrew the three nuts e.
- Unscrew the hexagon nut f.
- Unscrew 4 screws g.
- Disengage the latches.
- Remove both boards.

Speaker Selection Circuit Board (PW01)

- Remove the front.
- Unscrew two screws h.
- Remove the speaker selection circuit board.

Headphone Socket Board (PW51)

- Remove the front.
- Unscrew screw i.
- Remove the headphone socket board.

AF Board (P401)

For carrying out repair works on the main circuit board the bottom plate can be removed.

Removing of the AF Board:

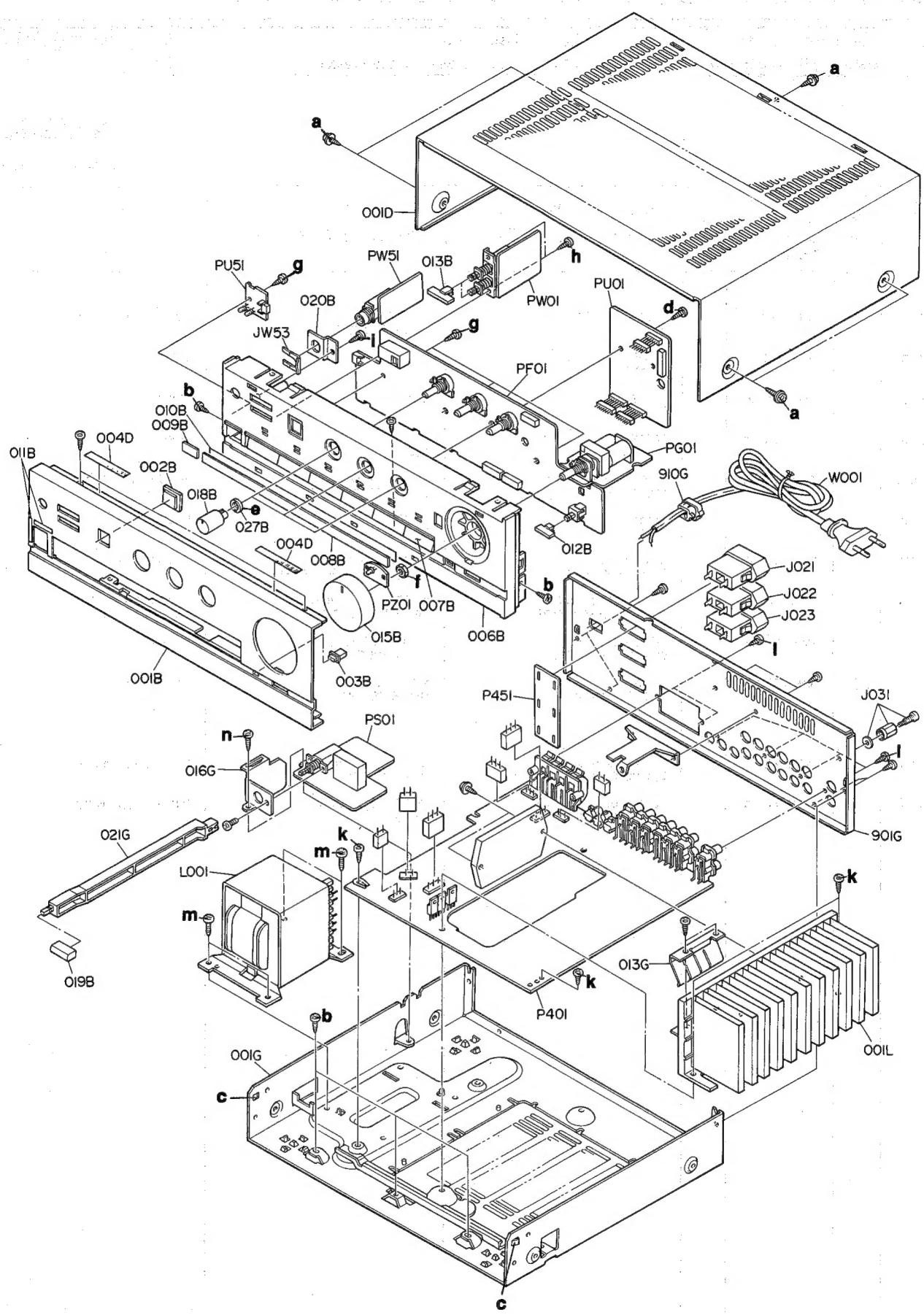
- Disconnect the plug-in connections.
- Unscrew 4 screws k.
- Unscrew 6 screws l.
- Remove the AF board.

Transformer (L001)

- Disconnect the connections.
- Unscrew 4 screws m.
- Remove the transformer.

Mains Board (PS01)

- Disconnect the connections.
- Unscrew screw n.
- Remove the mains board.



GRUNDIG ERSATZTEILLISTE

HIFI

(GB) List of Spare- Parts
(F) Liste de pièces détachées

(I) Lista ricambi
(E) Lista de piezas de repuestos

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V 5200

SACH-NR. 75987-509.00

Pos. Nr. Pos. No.	Abb. Nr. Fig. No.	Sachnummer Part.No. Références No. ordine	Anz.	BEZEICHNUNG DESIGNATION	(D) (F)	DESCRIPTION DENOMINACION	(GB) (E)	(I)
001B.000		75987-509.33		FRONTPLATTE KPL. PANNEAU AVANT		FRONT PANEL PLACA FRONTAL		PIASTRA FRONTALE
007B.000		75987-509.36		TASTE TOUCHE		KEY TECLA		TASTO
012B.000		75987-509.38		TASTE TOUCHE		KEY TECLA		TASTO
013B.000		75987-509.39		TASTE TOUCHE		KEY TECLA		TASTO
015B.000		75987-509.32		LAUTSTAERKEKNOPF KPL. VOLUME BOUTON		VOLUME KNOB BOTON DE VOLUMEN		VOLUME TASTO
016B.000		75987-509.31		KNOPF BOUTON		KNOPF BOTON		PULSANTE
019B.000		75987-509.37		NETZTASTE TOUCHE SECTEUR		MAINS BUTTON; TECLA INTERRUPTOR RED		TASTO DI RETE
021G.000		75987-509.30		ZWISCHENSTUECK PIECE INTERMEDIAIRE		INTERMEDIATE PIECE PIEZA INTERMEDIA		PEZZO INTERMEDIO
ZK01		75987-509.21		FERNBEDIENUNG COMMANDE A DISTANCE		REPOTE CONTROL TELEMANO		TELECOMANDE
W001	△	8290-991-003		NETZKABEL CABLE SECTEUR		MAINS LEAD CABLE DE RED		CAVO DI RETE
0999.997		72010-712.25		SERVICE MANUAL INSTRUCTIONS DE SERVICE		SERVICE MANUAL MANUAL DE SERVICIO		MANUALE DI SERVIZIO
0999.996		72010-710.80		BEDIENUNGSANLEITUNG MODE D'EMPLOI		INSTRUCTION MANUAL MANUAL DE MANEJO		INSTRUZIONI D'USO

ÄNDERUNGEN VORBEHALTEN - ALTERNATIONS RESERVED - CON RISERVA DI MODIFICHE - TOUS DROITS DE MODIFICATIONS RESERVES - CON RESERVA DE MODIFICACIONES

Pos. Nr. Pos. No.	Sachnummer Part number Références No. ordine	BEZEICHNUNG DESCRIPTION DENOMINAZIONE DESIGNATION DENOMINACION
C 802	75987-509.60	ELKO 6800UF/55V
C 803	75987-509.60	ELKO 6800UF/55V
D 701	75986-200.82	DIODE DSF 10 C
D 702	75986-200.82	DIODE DSF 10 C
D 703	75986-200.82	DIODE DSF 10 C
D 801	75987-451.33	DIODE S 5 VB 20
D 802	75986-200.82	DIODE DSF 10 C
D 803	75986-200.82	DIODE DSF 10 C
D 804	75986-200.82	DIODE DSF 10 C
D 805	75986-200.82	DIODE DSF 10 C
D 806	75986-200.82	DIODE DSF 10 C
D 807	75986-200.82	DIODE DSF 10 C
D 808	75986-200.82	DIODE DSF 10 C
D 809	75986-200.82	DIODE DSF 10 C
DF 01	75987-428.78	DIODE 1 SS 176
DF 02	75987-428.78	DIODE 1 SS 176
DG 01	75986-200.82	DIODE DSF 10 C
DG 02	75986-200.82	DIODE DSF 10 C
DP 01	75986-200.82	DIODE DSF 10 C
DU 01	75987-485.38	DIODE MTZJ 5.6 A
DU 02	75987-428.78	DIODE 1 SS 176
DU 03	75987-509.07	LE DIODE LT 3 H 8 B
DU 04	75987-509.07	LE DIODE LT 3 H 8 B
DU 05	75987-509.07	LE DIODE LT 3 H 8 B
DU 06	75987-509.07	LE DIODE LT 3 H 8 B
DU 07	75987-509.07	LE DIODE LT 3 H 8 B
DU 08	75987-509.07	LE DIODE LT 3 H 8 B
DU 09	75987-509.07	LE DIODE LT 3 H 8 B
DU 10	75987-509.07	LE DIODE LT 3 H 8 B
DU 11	75987-509.07	LE DIODE LT 3 H 8 B
DU 12	75987-509.07	LE DIODE LT 3 H 8 B
DU 13	75987-509.07	LE DIODE LT 3 H 8 B
DU 14	75987-509.07	LE DIODE LT 3 H 8 B
DU 15	75987-509.07	LE DIODE LT 3 H 8 B
DU 51	75987-509.06	LE DIODE LT 3 D 88
DU 52	75987-509.06	LE DIODE LT 3 D 88
DZ 01	75987-509.07	LE DIODE LT 3 H 8 B
FO 01	75987-509.47	QUARZ
FP 01	8315-618-002	FS.1,25 A/T
	8315-619-003	T 1,6 A
GP 01 	75987-509.56	KOND.0,01UF /20%
GP 02 	75987-509.56	KOND.0,01UF /20%

Pos. Nr. Pos. No.	Sachnummer Part number Références No. ordine	BEZEICHNUNG DESCRIPTION DENOMINAZIONE DESIGNATION DENOMINACION
L 001 	75987-509.22	TRAFO
L 701	75987-451.49	SPULE
L 702	75987-451.49	SPULE
L 703	75987-509.12	RELAIS
LP 01	75987-509.11	RELAIS
Q 401	75986-200.77	IC NJM 4558 DD
Q 701	75987-509.02	IC STK 4204 V
Q 702	75987-465.77	TRANS.2 SC 2240 GR
Q 703	75987-451.54	TRANS.2 SA 970
Q 704	75987-465.77	TRANS.2 SC 2240 GR
Q 751	75987-451.51	IC NJM 2041 DD
Q 801 	75987-509.05	IC NJM 7815 FA
Q 802 	75987-451.67	IC NJM 79 M 15 A
Q 803 	75987-509.04	IC NJM 7806 FA
QF 01	75986-200.77	IC NJM 4558 DD
QF 02	75986-200.77	IC NJM 4558 DD
QF 03	75987-509.08	TRANS.2 SC 2878 (A)
QF 04	75987-509.08	TRANS.2 SC 2878 (A)
QF 05	75987-509.08	TRANS.2 SC 2878 (A)
QF 06	75987-509.08	TRANS.2 SC 2878 (A)
QG 01	75987-509.03	IC LB 1630
QP 01	75987-465.77	TRANS.2 SC 2240 GR
QS 01	8305-262-821	IC LC 7821 SANYO
QS 03	75987-509.01	IC LC 4966
QS 04	75987-300.75	TRANS.2 SA 1048 GR
QS 05	75987-429.00	TRANS.2 SC 2458 GR
QU 01	75987-509.09	MICROPROCESSOR
QU 03	75987-509.58	TRANS.DTA 114 ES
QU 04	75987-509.58	TRANS.DTA 114 ES
QU 05	75987-429.00	TRANS.2 SC 2458 GR
QU 06	75987-429.00	TRANS.2 SC 2458 GR
QU 07	75987-429.00	TRANS.2 SC 2458 GR
QU 08	75987-429.00	TRANS.2 SC 2458 GR
QU 10	75987-509.10	FOTOTRANS.
QU 11	75987-509.58	TRANS.DTA 114 ES
QU 12	75987-509.58	TRANS.DTA 114 ES
QU 13	75987-509.58	TRANS.DTA 114 ES
QU 14	75987-509.58	TRANS.DTA 114 ES
QU 15	75987-509.58	TRANS.DTA 114 ES
QU 16	75987-509.58	TRANS.DTA 114 ES
QU 17	75987-509.58	TRANS.DTA 114 ES
QU 18	75987-509.58	TRANS.DTA 114 ES
R 715 	8766-701-049	KSW SI A 100 OHM 5% -GA
R 716 	8766-701-049	KSW SI A 100 OHM 5% -GA
R 801 	75987-509.14	SICHERUNGSWIDERSTAND
R 803 	8766-701-025	KSW SI A 10 OHM 5% -GA
RF 33	75987-509.15	ESTR.100 KOHM
RF 39	75987-509.16	ESTR.100 KOHM(B)
RF 40	75987-509.16	ESTR.100 KOHM(B)
RG 01	75987-509.17	ESTR.50 KOHM(B)

Sicherheitsvorschriften Safety requirements

Pos. Nr. Pos. No.	Sachnummer Part number Références No. ordine	BEZEICHNUNG DESCRIPTION DENOMINAZIONE DESIGNATION DENOMINACION	(D) (GB) (I) (F) (E)
SG 01	75987-509.20	SCHALTER	
SP 01	75987-509.18	SCHALTER	
SU 01	75987-509.19	SCHALTER	
SU 02	75987-509.19	SCHALTER	
SU 03	75987-509.19	SCHALTER	
SU 04	75987-509.19	SCHALTER	
SU 05	75987-509.19	SCHALTER	
SU 06	75987-509.19	SCHALTER	
SW 01	75987-509.21	SCHALTER	

Sicherheitsvorschriften/Safety requirements / Prescrizioni di sicurezza / Prescriptions de sécurité / Prescripciones de seguridad

D **Achtung:** Bei Eingriffen ins Gerät sind die Sicherheitsvorschriften nach VDE 701 (reparaturbezogen) bzw. VDE 0860 / IEC 65 (gerätebezogen) zu beachten!

 Bauteile nach IEC- bzw. VDE-Richtlinien! Im Ersatzfall nur Teile mit gleicher Spezifikation verwenden!

MOS - Vorschriften beim Umgang mit MOS - Bauteilen beachten!

GB **Attention:** Please observe the applicable safety requirements according to VDE 701 (concerning repairs) and VDE 0860 / IEC 65 (concerning type of product)!

 Components to IEC or VDE guidelines! Only use components with the same specifications for replacement!

Observe MOS components handling instructions when servicing!

I **Attenzione:** Osservarne le corrispondenti prescrizioni di sicurezza VDE 701 (concernente servizio) e VDE 0860 / IEC 65 (concernente il tipo di prodotto)!

 Componenti secondo le norme VDE resp. te IEC! In caso di sostituzione impiegare solo componenti con le stesse caratteristiche.

Osservare le relative prescrizioni durante, lavori con componenti MOS!

F **Attention:** Priere d'observer les prescriptions de sécurité VDE 701 (concernant les réparations) et VDE 0860 / IEC 65 (concernant le type de produit)!

 Composants répondant aux normes VDE ou IEC. Les remplacer uniquement par des composants ayant les mêmes spécifications.

Lors de la manipulation des circuits MOS, respecter les prescriptions MOS!

E **Atención:** Recomendamos las normas de seguridad VDE u otras normas equivalentes, por ejemplo: VDE 701 para reparaciones, VDE 0860 / IEC 65 para aparatos!

 Componentes que cumplen las normas VDE/IEC. En caso de sustitución, emplear componentes con idénticas especificaciones!

Durante la reparacion observar las normas sobre componentes MOS!

USA **Attention:** This set can only be operated from AC mains of 120 V/60 Hz. Also observe the information given on the rear of the set.

CAUTION: For continued protection against risk of fire replace only with same type fuses!

 **CAUTION:** To reduce the risk of electric shock, do not remove cover (or back), no user-serviceable parts inside, refer servicing to qualified service personnel.

 Components to safety guidelines (IEC/U.L.)! Only use components with the same specifications for replacement!

Observe by checking leakage-current or resistance measurement that the exposed parts are acceptably insulated from the supply circuit.

Observe MOS components handling instructions when servicing!

D Sicherheitsbestimmungen

Nach Servicearbeiten ist bei Geräten der Schutzklasse II die Messung des Isolationswiderstandes und des Ableitstromes bei eingeschaltetem Gerät nach VDE 0701 / Teil 200 bzw. der am Aufstellort geltenden Vorschrift, durchzuführen!

Dieses Gerät entspricht der Schutzklasse II, erkennbar durch das Symbol .

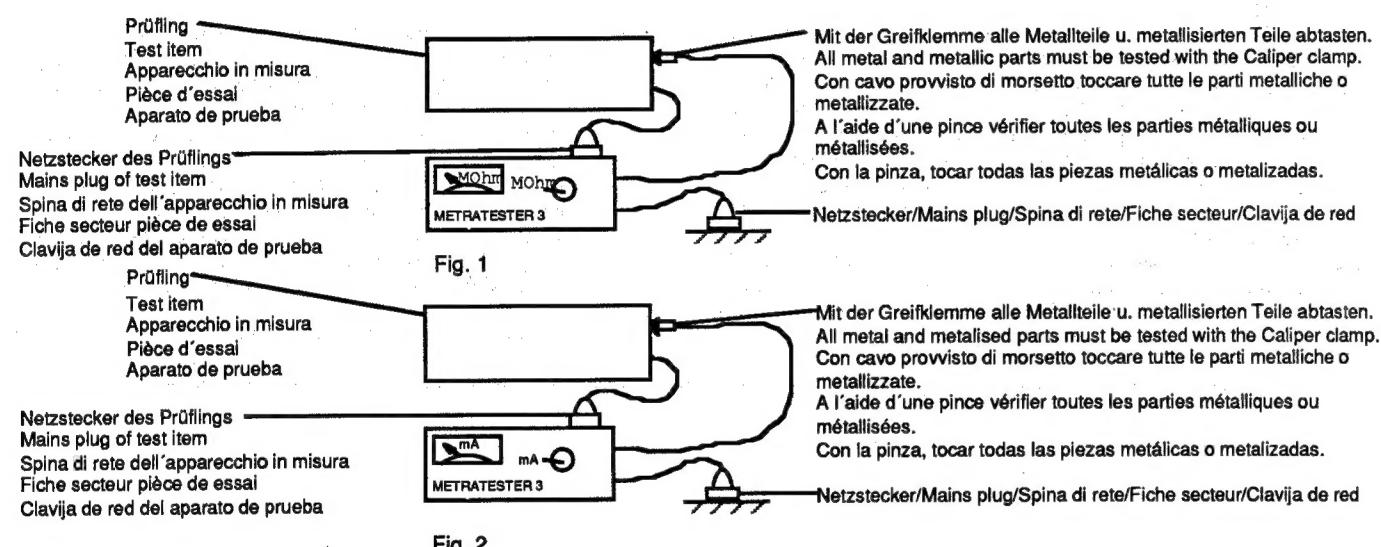
E Messen des Isolationswiderstandes nach VDE 0701.

Isolationsmesser ($U_{Test} = 500 \text{ V}$) gleichzeitig an beiden Netzpolen und zwischen allen Gehäuse- oder Funktionsteilen (Antenne, Buchsen, Tasten, Zierteilen, Schrauben, usw.) aus Metall oder Metalllegierungen anlegen. Fehlerfrei ist das Gerät bei einem:

$$R_{Isol} \leq 2 \text{ M} \text{ bei } U_{Test} = 500 \text{ V}$$

Meßzeit: 1 s (Fig. 1)

Anmerkung: Bei Geräten der Schutzklasse II kann durch Entladungswiderstände der Meßwert des Isolationswiderstandes konstruktionsbedingt $< 2 \text{ M}$ sein. In diesen Fällen ist die Ableitstrommessung maßgebend.



Empfehlungen für den Servicefall

- Nur Original - Ersatzteile verwenden.
Bei Bauteilen oder Baugruppen mit der Sicherheitskennzeichnung  sind Original - Ersatzteile zwingend notwendig.
- Auf Sollwert der Sicherungen achten.
- Zur Sicherheit beitragende Teile des Gerätes dürfen weder beschädigt noch offensichtlich ungeeignet sein.
- Dies gilt besonders für Isolierungen und Isolierteile.

E Messen des Ableitstromes nach VDE 0701.

Ableitstrommesser ($U_{Test} = 220 \text{ V}$) gleichzeitig an beiden Netzpolen und zwischen allen Gehäuse- oder Funktionsteilen (Antenne, Buchsen, Tasten, Zierteilen, Schrauben, usw.) aus Metall oder Metalllegierungen anlegen. Fehlerfrei ist das Gerät bei einem:

$$I_{Ableit} \leq 1 \text{ mA bei } U_{Test} = 220 \text{ V}$$

Meßzeit 1 s (Fig. 2)

- Wir empfehlen die Messungen mit dem METRATESTER 3 durchzuführen. (Meßgerät zur Prüfung elektrischer Geräte nach VDE 0701).

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D 8000 München 50

- Ist die Sicherheit des Gerätes nicht gegeben, weil

- eine Instandsetzung unmöglich ist
- oder der Wunsch des Benutzers besteht, die Instandsetzung nicht durchführen zu lassen, so muß dem Betreiber die vom Gerät ausgehende Gefahr schriftlich mitgeteilt werden.

$$I_{Leak} \leq 1 \text{ mA bei } U_{Test} = 220 \text{ V}$$

Meßzeit: 1 s, (Fig. 2)

Safety Standard Compliance

After service work on a product conforming to the Safety Class II, the insulating resistance and the leakage current with the product switch on must be checked according to VDE 0701 or to the specification valid at the installation location!

This product conforms to the Safety Class II, as identified by the symbol .

Measurement of the Insulation Resistance to VDE 0701.

Connect an Insulation Meter ($U_{Test} = 500 \text{ V}$) to both mains poles simultaneously and between all cabinet or functional parts (antenna, sockets, buttons, decorative parts, etc.) made from metal or metal alloy. The product is fault free if:

$$R_{Isol} \geq 2 \text{ M at } U_{Test} = 500 \text{ V}$$

Measuring time: 1 s, (Fig. 1)

Comment: On product conforming to the Safety class II the insulation Resistance can be $< 2 \text{ MOhm}$, dependent contructively on discharge resistors. In this cases, the check of the leakage current is significant.

Measurement of the Leakage Current to VDE 0701.

Connect the Leakage Current Meter ($U_{Test} = 220 \text{ V}$) to both mains poles simultaneously and between all cabinet or functional parts (antenna, sockets, buttons, screws, etc.) made from metal or metal alloy. The product is fault free if:

$$I_{Leak} \leq 1 \text{ mA at } U_{Test} = 220 \text{ V}$$

Measuring time: 1 s, (Fig. 2)

- We recommend that the measurements are carried out using the METRATESTER 3. (Test equipment for checking electrical products to VDE 0701).

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- If the safety of the product is not proved, because

- a repair and restoration is impossible
- or the request of the user is that the restoration is not to be carried out, the operator of the product must be warned of the danger by a written warning.

Recommendation for service repairs

- Use only original spare parts.
With components or assemblies accompanied with the Safety Symbol  only original-spare parts are strictly to be used.
- Use only original fuse value.
- Safety compliance, parts of the product must not be visually damaged or unsuitable. This is valid especially for insulators and insulating parts.
- Mains leads and connecting leads should be checked for external damage before connection. Check the insulation!
- The functional safety of the tension relief and bending protection bushes are to be checked:
- Thermally loaded solder pads are to be suck off and re-soldered.
- Ensure that the ventilation slots are not obstructed.

Prescriptions de sécurité

Suite aux travaux de maintenance sur les appareils de la classe II, il convient de mesurer la résistance d'isolation et le courant de fuite sur l'appareil en état de marche, conformément à la norme VDE 0701 § 200, ou selon les prescriptions en vigueur sur le lieu de fonctionnement de l'appareil!

Cet appareil est conforme aux prescriptions de sécurité classe II, signalé par le symbole .

Mesure de la résistance d'isolation selon VDE 0701

Brancher un appareil de mesure d'isolation ($U_{test} = 500 \text{ V}$) simultanément sur les deux pôles secteur et entre toutes les parties métalliques ou métallisées accessibles de l'appareil (antenne, embases, touches, enjoliveurs, vis, etc.).

Le fonctionnement est correct lorsque:

$$R_{Isol} \geq 2 \text{ M pour une } U_{test} = 500 \text{ V}$$

Durée de la mesure: 1 s

Observations: L'isolation des appareils de la classe II, de part leur conception résistance de décharge, peut être intérieur à $< 2 \text{ M}$, (Fig. 1).

Mesure du courant de fuite selon VDE 0701

Brancher un ampèremètre du courant de fuite ($U_{test} = 220 \text{ V}$) simultanément sur les deux pôles du secteur et entre toutes les parties métalliques ou métallisées accessibles de l'appareil (antenne, embases, touches, enjoliveurs, vis, etc.). Le fonctionnement est correct lorsque (Fig. 2):

$$I_{Leak} \leq 1 \text{ mA pour } U_{test} = 200 \text{ V}$$

Durée de la mesure 1 s.

- Pour ces mesures, nous préconisons l'utilisation du METRATESTER 3 (instrument de mesure pour le contrôle d'appareils électriques conformes à la norme VDE 0701).

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Triestr. 44
D 8000 München 50

- Dans le cas où la sécurité de l'appareil n'est pas assurée pour les raisons suivantes:

- la remise en état est impossible
- l'utilisateur ne souhaite pas la remise en état de l'appareil. l'utilisateur doit être informé par écrit du danger que représente l'utilisation de l'appareil.

Recommendations pour la maintenance

- Utiliser exclusivement des pièces de rechange d'origine. Les composants et ensembles de composants signalés par le symbole  doivent être impérativement remplacés par des pièces d'origine.
- Respecter la valeur nominale des fusibles.
- Veiller au bon état et la conformité des pièces contribuant à la sécurité de fonctionnement de l'appareil. Ceci s'applique particulièrement aux isolements et pièces isolantes.
- Vérifier le bon état extérieur des câbles secteur et des câbles de raccordement au point de vue isolation avant la mise sous tension.
- Vérifier le bon état des protections de gaine.
- Nettoyer les soudures avant de les renouveler.
- Dégager les voies d'aération.

I

Norme di sicurezza

Successivamente ai lavori di riparazione, negli apparecchi della classe di protezione II occorre effettuare la misura della resistenza di isolamento e della corrente di dispersione quando l'apparecchio è acceso, secondo le norme VDE 0701 / parte 200 e rispettivamente le norme locali!

Questo apparecchio corrisponde alla classe di protezione II ed è riconoscibile dal simbolo  M

● Misura della resistenza di isolamento secondo VDE 0701

Applicare il misuratore di isolamento (tens. prova = 500 V-) contemporaneamente ai due poli di rete e tra tutte le parti del mobile e delle funzioni (antenna, prese, tasti, mascherine, viti ecc.) in metallo o in lega metallica. L'apparecchio non presenta difetti quando:

$$R_{\text{isol}} \leq 2 \text{ M con tens. prova} = 500 \text{ V}$$

Tiempo di misura: 1s (Fig. 1).

Nota: Negli apparecchi della classe II, che per motivi costruttivi dispongono di resistenze di dispersione, il valore di misura della resistenza di isolamento può essere inferiore a $< 2 \text{ M}$.

In questi casi è determinante la misura della corrente di dispersione.

● Misura della corrente di dispersione secondo VDE 0701

Applicare il misuratore di isolamento (tens. prova = 220 V-) contemporaneamente ai due poli di rete e tra tutte le parti del mobile e delle funzioni (antenna, prese, tasti, mascherine, viti ecc.) in metallo o in lega metallica. L'apparecchio non presenta difetti quando:

$$I_{\text{disp}} \leq 1 \text{ mA con tens. prova} = 220 \text{ V}$$

Tiempo di misura: 1 s (Fig. 2)

E

DISPOSICIONES PARA LA SEGURIDAD

Después de operaciones de servicio en aparatos de la clase de protección II, se llevará a cabo la medida de la resistencia de aislamiento y de la corriente derivada, con el aparato conectado, de acuerdo con VDE 0701 o de las disposiciones vigentes en el lugar de instalación.

Este aparato corresponde a la clase de protección II, reconocible por el simbolo .

● Medida de la resistencia de aislamiento según VDE 0701.

Aplicar el medidor de aislamiento ($U_{\text{prueba}} = 500 \text{ V}$), simultáneamente, a los dos polos de red y entre todas las partes del mueble o de funciones (antena, conectores, teclas, tornillos, etc.) de metal o aleaciones metálicas. El aparato estará libre de defectos con:

$$R_{\text{aisl}} \leq 2 \text{ M con } U_{\text{prueba}} = 500 \text{ V}$$

Tiempo de medida: 1 seg.

Observación: En aparatos de la clase de protección II, condicionado por la construcción y por resistencias de descarga, el valor de medida de la resistencia de aislamiento puede ser superior a $< 2 \text{ M}$. En este caso es decisiva la medida de la corriente derivada (Fig.1).

● Medida de la corriente derivada de acuerdo con VDE 0701.

Aplicar el medidor de corriente derivada ($U_{\text{prueba}} = 220 \text{ V}$) simultáneamente a los dos polos de red y entre todas las partes del mueble o de funciones (antena, conectores, teclas, tornillos, etc.) de metal o aleaciones metálicas. El aparato estará libre de defectos con (Fig.2):

$$I_{\text{deriv}} \leq 1 \text{ mA con } U_{\text{prueba}} = 220 \text{ V}$$

Tiempo de medida: 1 seg.

USA

US & Canada

Safety Instructions

The lightning bolt with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage", within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This product was designed and manufactured to meet strict quality and safety standards. There are, however, some installation and operation precautions which you should be particularly aware of.

- **Read Instructions** - All the safety and operating instructions should be read before the appliance is operated.
- **Retain Instructions** - The safety and operating instructions should be retained for future reference.
- **Heed Warnings** - All warnings on the appliance and in the operating instructions should be adhered to.
- **Follow Instructions** - All operating and use instructions should be followed.
- **Water and Moisture** - The appliance should not be used near water-for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
- **Wall or Ceiling Mounting** - The appliance should be mounted to wall or ceiling only as recommended by the manufacturer.
- **Ventilation** - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- **Heat** - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

- **Power Sources** - The appliance should be connected to a power supply only of the type given above or as marked on the appliance.
- **Power-Cord Protection** - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- **Cleaning** - The appliance should be cleaned only as recommended by the manufacturer.
- **Power Lines** - An outdoor antenna should be located away from power lines.
- **Outdoor Antenna Grounding** - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI / NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.
- **Nonuse Periods** - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
- **Object and Liquid Entry** - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
- **Damage Requiring Service** - The appliance should be serviced by qualified service personnel when: The power-supply cord or the plug has been damaged; or objects have fallen or liquid has been spilled into the appliance; or the appliance has been exposed to rain; or the appliance does not appear to operate normally or exhibits a marked change in performance; or the appliance has been dropped, or the enclosure damaged; or the batteries have been damaged.
- **Servicing** - the user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Points x1 and x2 apply only to receivers or tuners.

- Aconsejamos llevar a cabo las medidas con el **METRATESTER 3** (Instrumento de medida para la comprobación de aparatos eléctricos según VDE 0701).

Metrawatt GmbH
Geschäftsstelle Bayern
Triebstr. 44
D 8000 München 50

- Si no se cumple la seguridad del aparato, porque

- la puesta en orden es imposible, o
- existe el riesgo del usuario de no realizarla, se ha de comunicar a quien lo haga funcionar, por escrito, del peligro latente del aparato.

Recomendaciones para caso de servicio

- Emplear sólo componentes originales. Con componentes o grupos constructivos con el indicativo de seguridad  son de obligada necesidad piezas de repuesto originales.
- Las partes del aparato que contribuyan a la seguridad del mismo no deben estar deterioradas ni ser manifiestamente inadecuadas.
- Esto es especialmente válido para aislamientos o piezas aislantes.
- Los cables de red y de conexión se comprobarán, antes de conectarlos, en cuanto a defectos externos. Comprobar el aislamiento.
- Se ha de comprobar la función de seguridad de la compensación de tiro o de los mangos de protección contra doblamientos.
- Repasar los puntos de soldadura sometidos a carga térmica.
- Mantener libres los canales aireación.

Testprogramm

Aktivieren des Testprogramms: Während dem Einschalten die Tasten MONO, TAPE und CD gedrückt halten.

Test Program

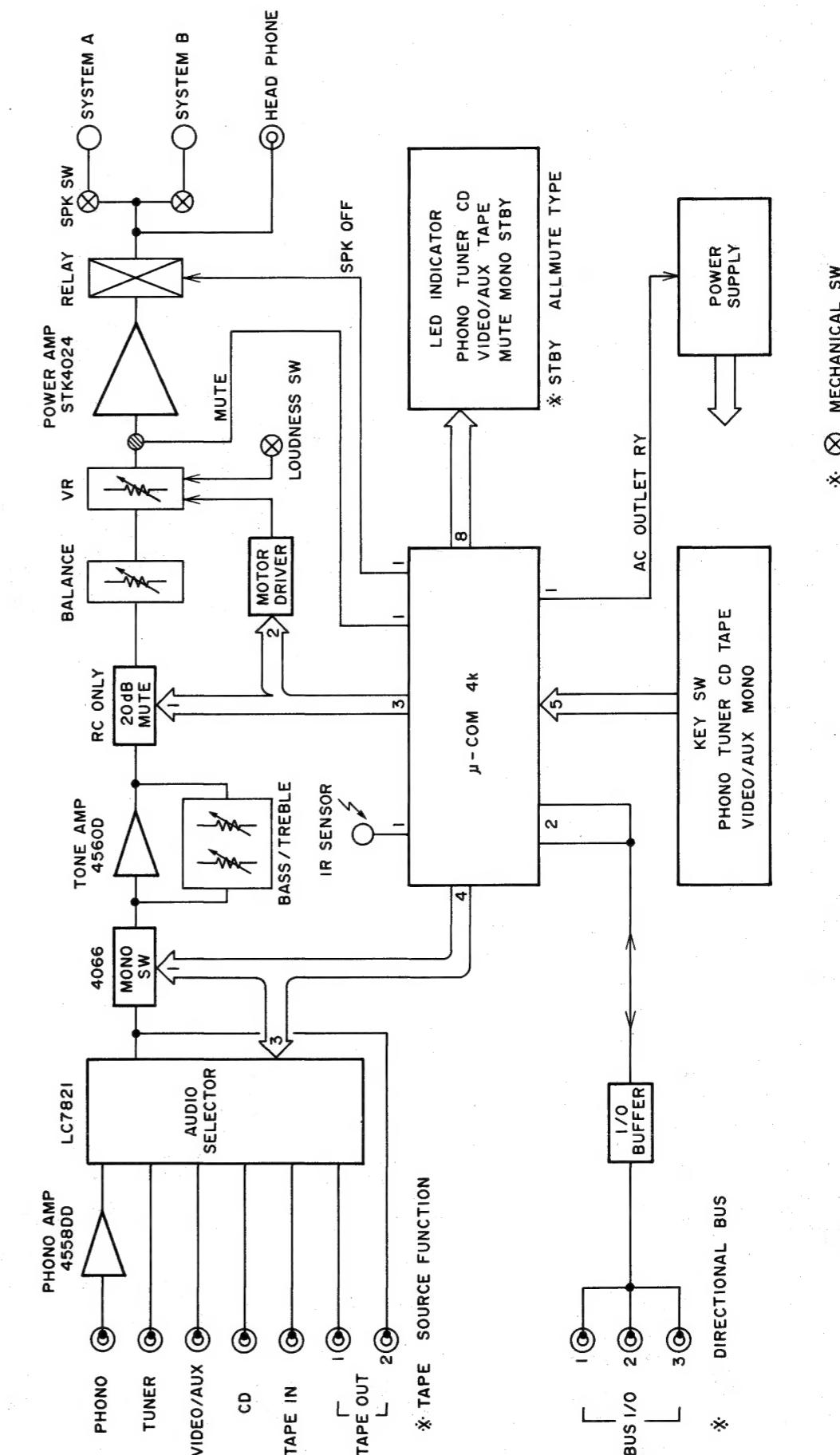
Starting the test program: Turn on the POWER switch while pressing the keys MONO, TAPE and CD.

Testschritt Teststep	Funktion	Pegel am RC-Bus Level at RC bus	AC-Buchsen AC outlet
1	alle LED's / all LED's (2x)	High	ein/on,aus/off (2x)
2	Tuner LED, Volume LED	Low	ein/on
3	Video/Aux LED, Volume LED	Low	ein/on
4	Phono LED, Volume LED	Low	ein/on
5	CD LED, Volume LED	Low	ein/on
6	Tape LED, Volume LED	Low	ein/on
7	Tape LED, Mono LED	High	aus/off
8	Tape LED, Mute LED	Low	aus/off
9	Tape LED, Volume LED	Low	ein/on
10	Volume-Knopf dreht nach rechts Volume knob rotates to right	High	aus/off
11	Volume LED, Tape LED Volumeknopf dreht nach links Volume knob rotates to left	High	ein/on

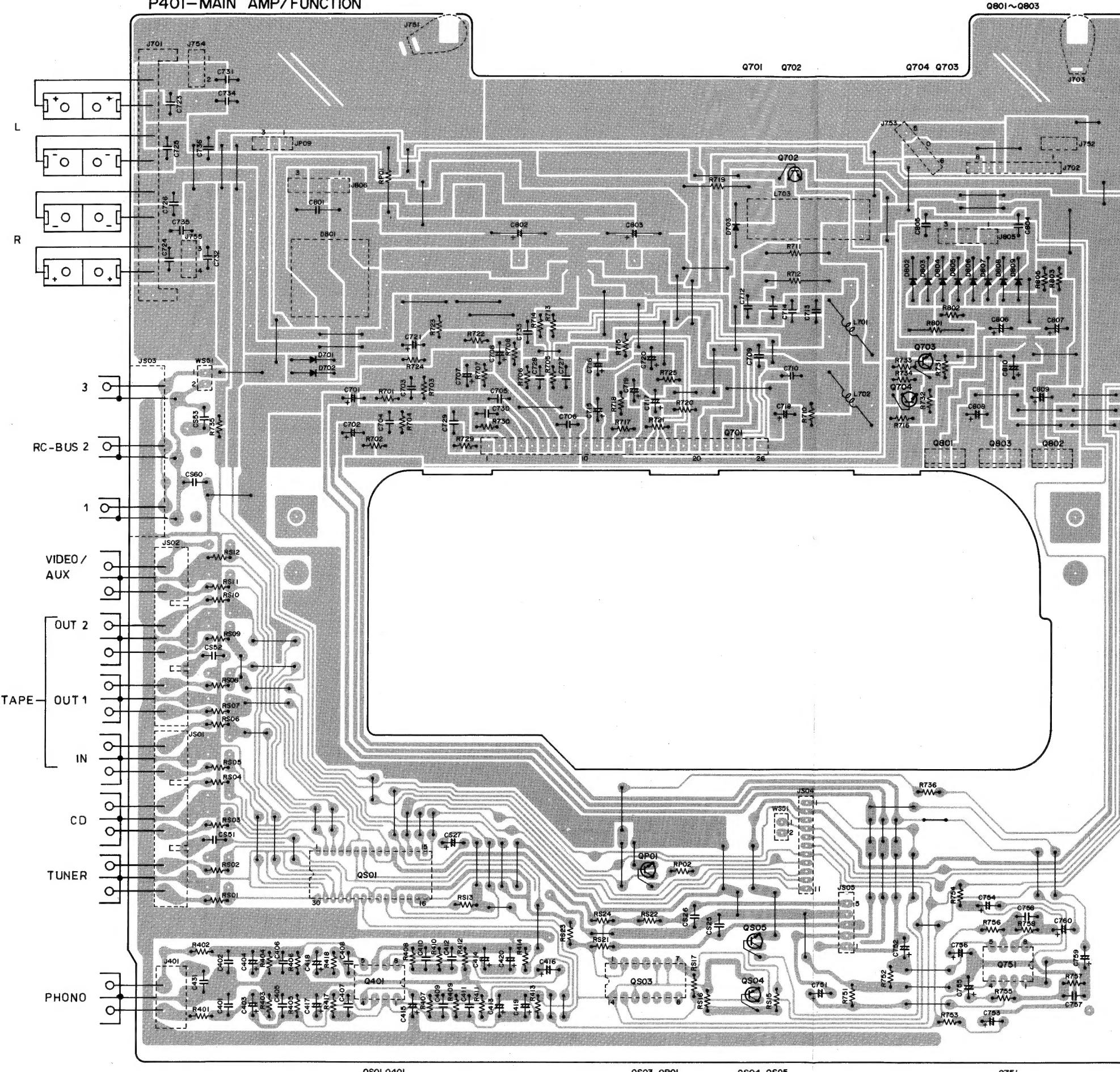
Beenden des Testprogramms: Gerät ausschalten.

Ending the test program: Switch off the unit.

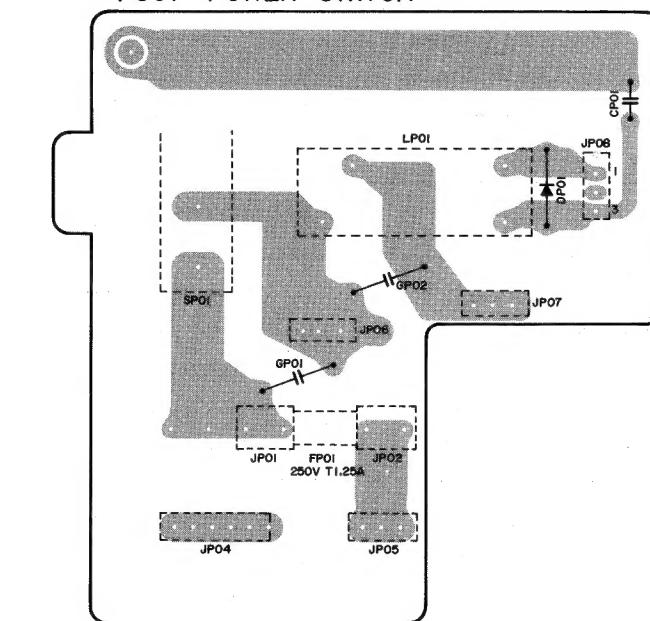
Blockschaltbild Block Diagram



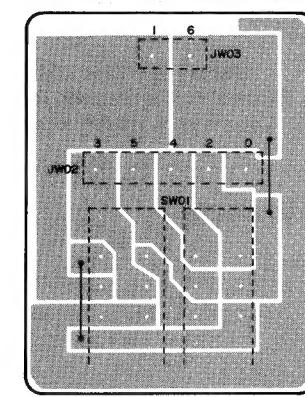
P401-MAIN AMP/FUNCTION



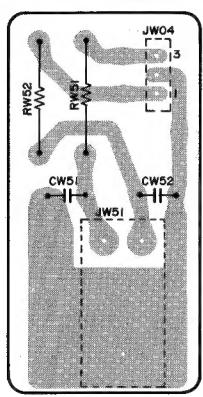
PSOI – POWER SWITCH



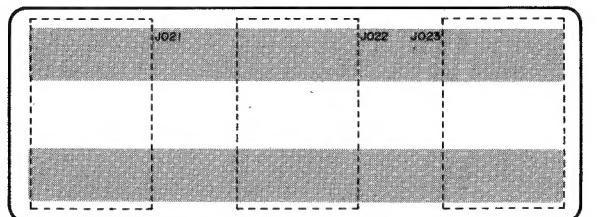
PWOI-SPEAKER SWITCH



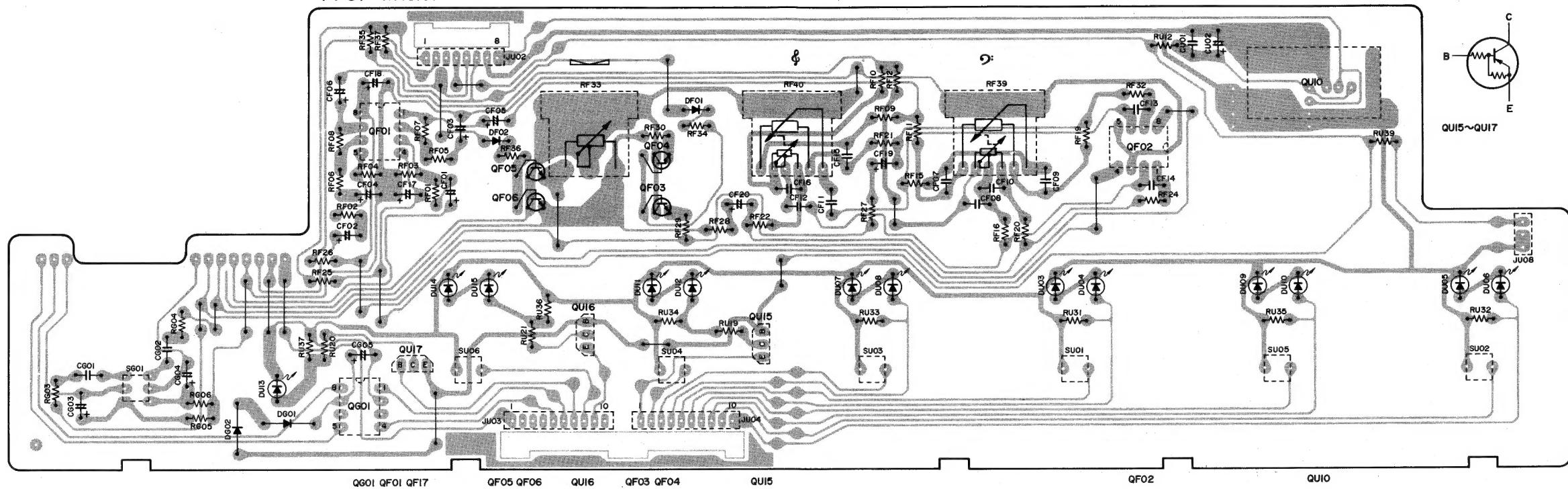
PW51- HEADPHONE



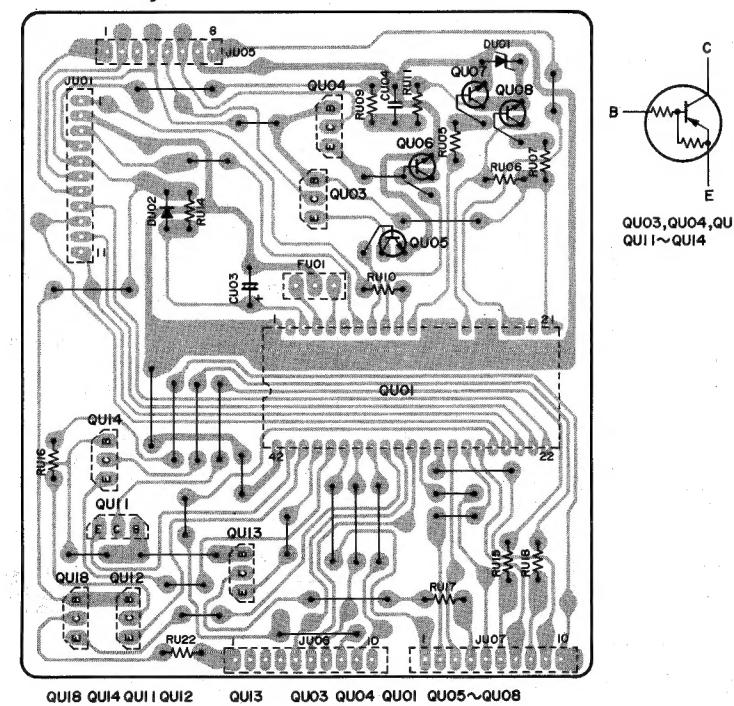
P45I-AC OUTLET



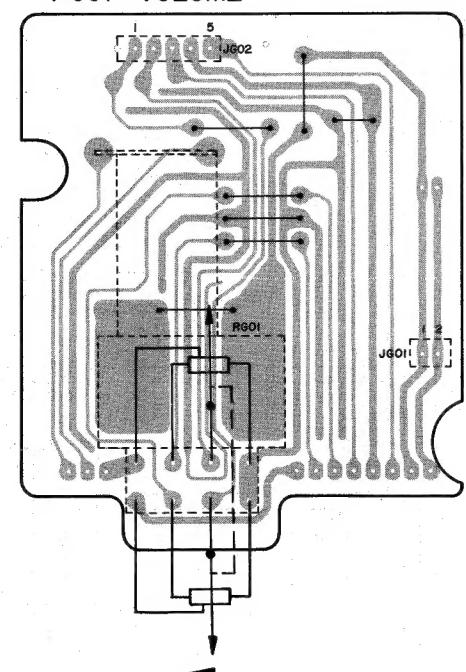
PFOI - FRONT



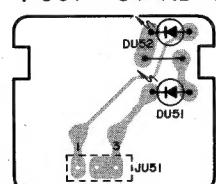
PUOI - μ -COM



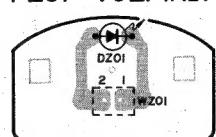
PGOI - VOLUME



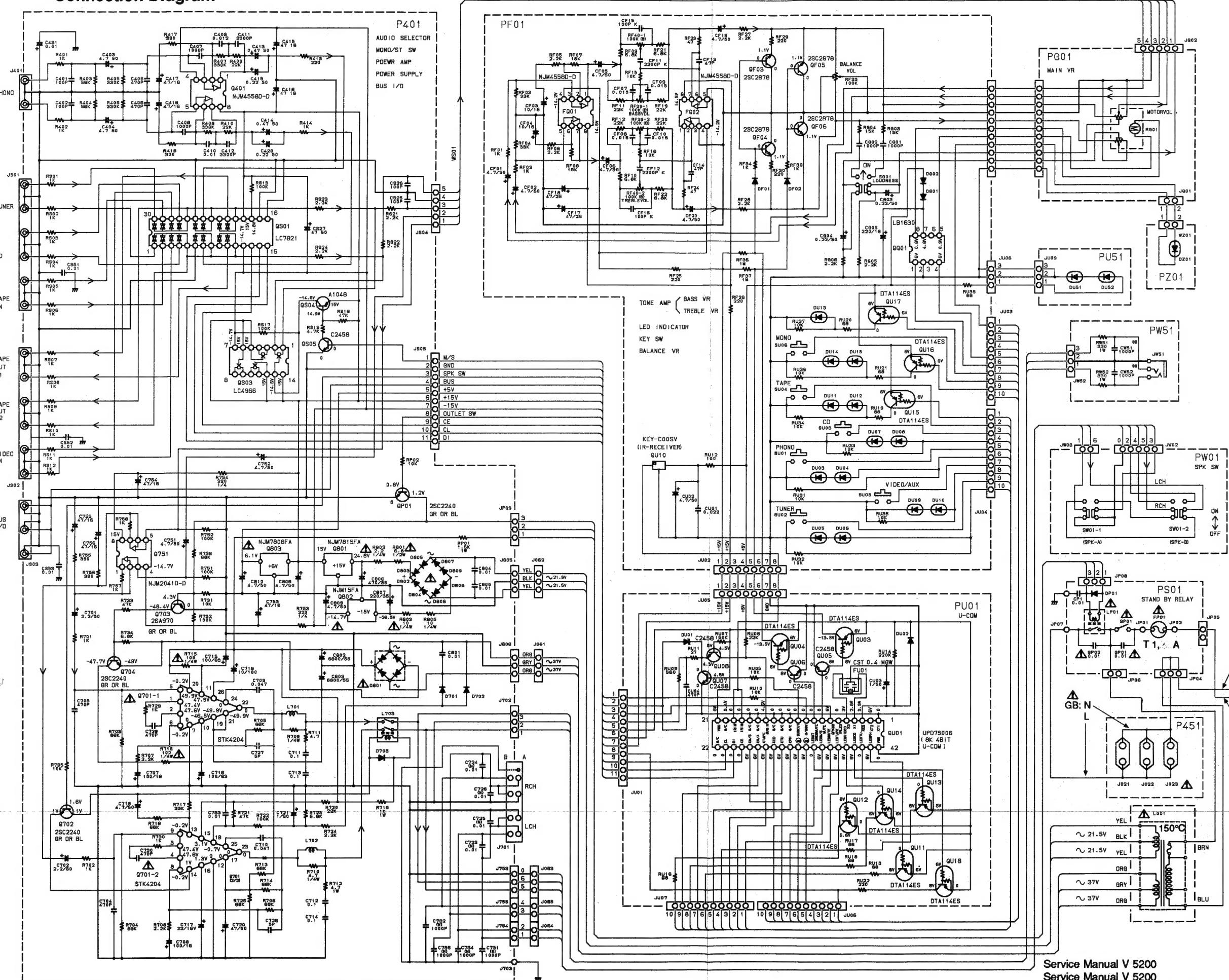
PU51 - STAND BY LED



PZOI - VOL. IND. LED



Schaltbild Connection Diagram



DU01		5.6V ZENER
DU02		19S133 MA185
DU03 - DU15		LT3H8B YELLOW
DZ01		LT3H8B YELLOW
DU51 DU52		LT3D8B RED
D701 - D703		RL103E/DSF10C
D802 - D809		RL103E/DSF10C
DP01		RL103E/DSF10C
D801		S5VB20 6A200V
DF01 DF02		1SS176 MA165
		1SS254
QS04		A608SP A1048
		A1309 A933S
QS05 QU05 - QU08		C536SP C2458
		C3311 C1740S

22	N/C	VDD	21
	CL	N/C	
	DI	IRIN	
	CE	IRIN	
	KM/S	N/C	
	KM/A	N/C	
	KTAPE	BUSIN	
	KCD	N/C	
	KTU	N/C	
	KPH	N/C	
	<u>M</u>	BUSCUT	
	<u>M</u>	M/SSW	
	LEDST	20DBMUTE	
	LEDM/S	MUTE	
	LEDMUTE	SPKSW	
	LEDTAPE	IRLED	
	LEDVIDEO	X2	
	LEDCD	X1	
	LEDTU	RES	
	LEDPH	XT2	
42	VSS	XT1	1

GRUNDIG
V 5200

Änderungen vorbehalten
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Service Manual V 5200
Service Manual V 5200
Instructions de Service V 5200
Manuale di servizio V 5200
Manual de Servicio V 5200